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22428	7590	02/12/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			QUAN, ELIZABETH S	
			ART UNIT	PAPER NUMBER
			1743	

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Please find below and/or attached an Office communication concerning this application or proceeding.

A→

<b>Office Action Summary</b>	<b>Application No.</b> 09/807,513	<b>Applicant(s)</b> COHEN ET AL.	
	<b>Examiner</b> Elizabeth Quan	<b>Art Unit</b> 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 1-3,7 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/9/2003</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the mounting orifices with substantially elongate or oblong shape and indexing means comprising a rack must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

3. The disclosure is objected to because of the following informalities: The specification should be subdivided into appropriate subheading. The specification should not describe the invention in terms of the claims since the claims are likely to change during the course of prosecution.

Appropriate correction is required.

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### ***Claim Objections***

4. Claims 1 and 2 are objected to because of the following informalities: The use of the term "whose" appears to personify the horizontal working plane, which is inappropriate since the working plane is not human and does not possess human qualities. The preamble could be written in a clearer manner. Appropriate correction is required.

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5. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. It appears that oblong and elongate are synonyms. Orifices elongate in shape have already been recited.

6. Claim 7 is objected to because of the following informalities: "vertical drive shaft" should be "vertical central shaft" as established in parent claim 1. Appropriate correction is required.

7. Claim 15 is objected to because of the following informalities: "of revolution" in the second line should be deleted since it does not make sense. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claim 9 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. According to the instant specification and drawings, the rack is provided on the inner surface of the lid but the indexing means does not comprise the rack. In fact the indexing means is below the horizontal plate and the cover with the rack appears to be above the horizontal plate. The indexing means cannot possibly comprise the rack. Although it is unclear what the function of

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the rack is, the rack cannot possibly be involved with indexing since indexing occurs when the lid is open such that the rack is not even near the vessel and its indexing means within it.

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

11. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claims 1 and 16 are rendered indefinite since it is unclear if the through orifices and mounting orifices are the same element. On lines 16-21, the claim recites "...a horizontal plate (104) mounted interlocked in rotation on the central shaft and provided on its surface with a plurality of through orifices (105) for the vertical mounting of tubes (106) which are each intended to contain a volume of a sample to be centrifuged, these mounting orifices..." The recitation leads one to think that the mounting orifices are the through orifices. On lines 27 and 28, the claim recites "... said mounting orifices of the tubes..." The recitation leads one to think that the mounting orifices are not through orifices but orifices of the tubes. Referring to claim 1, figs. 4 and 5 do not show the tubes vertically mounted. Furthermore, the claim recites that the front and rear walls are inclined at an acute angle of less than 90 degrees relative to the horizontal, such that the tubes are not mounted vertically. Claim 6, which is dependent on claim 1, recites that the orifices are even more inclined at an angle of less than or equal to 60 degrees relative to the horizontal. Appropriate correction is required.

13. Claim 2 recites the limitation "the parallel mounting" in line 18. There is insufficient antecedent basis for this limitation in the claim.

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14. For examination purposes, "characterized in that" has been interpreted as open language.
15. Regarding claims 11, 13, 15, the term "of the order of" is indefinite since it is unknown by how many mm more or less from the numerical dimension and still qualify to be "of the order of" that numerical dimension. Furthermore, "of the order of" is used with magnitudes and does not seem appropriate in the claim. The same idea applies to claims 11 and 13.
16. Claim 17 is rendered indefinite since it is unclear by how many orifices more or less than 48 there can be and still qualify to be "about 48." The specification provides no guidelines on interpreting "about 48."
17. Regarding claims 18-20, the phrase "preferably" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 102***

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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20. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

21. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

22. Claims 1, 5-8, 10-12, 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,665,047 to Brimhall in view of U.S. Patent No. 5,322,497 to Kobayashi.

Brimhall discloses a device for centrifuging chemical or biological products (fig. 2). The device comprises a casing (12) defining a cylindrical vessel (26), which contains a vertical central shaft (18) and horizontal plate (30). The vessel is open at the top when the cover (14), which is mounted so as to pivot on the casing, is pivoted open (fig. 2). The central shaft rotates by a rotary driving means (54) (figs. 2 and 3). The horizontal plate is mounted and interlocked with the central shaft (col. 3, line 44). The horizontal plate is provided with through orifices providing entrance to a plurality of tube sets (40a-f, 41a-f, 42a-f, 43a-f) (fig. 2).

The orifices have a substantially elongate, oblong shape with front and rear walls that are inclined at an acute angle of less than 90 degrees relative to the horizontal (fig. 2). It appears that the rear and front walls are inclined by an angle of less than or equal to 60 degrees relative to the horizontal (fig. 2). Furthermore, it has been held that changing the form or shape is an obvious engineering design absent persuasive evidence that the particular configuration of the claimed invention was significant (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)) and that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device (*Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984)).

Although it is unclear whether the device is positioned on a horizontal working plate with an available area less than or equal to about  $0.4 \text{ m}^2$ , this is considered by the Examiner a recitation of intended use of the claimed invention. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPQ 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

The external “useful” height appears to be a matter of perspective. A person may decide that the external “useful” height corresponds to the height of the rotor. It appears that this



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limitation is intrinsically met. Regardless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the height of the device of Goodman since it has been held that discovering an optimum workable range involves only routine skill in the art (*In re Aller*, 105 USPQ 233) and that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device (*Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984)).

Brimhall discloses an index plate (32) with ports as keying mechanism to placing tubes in certain orifices. According to <http://www.dictionary.com>, index is defined as something that serves to guide, point out, or otherwise facilitate reference. The index plate is a means for indexing or guiding, pointing out, or facilitating reference the position of the plate each time the plate stops by indicating certain orifices for positioning tubes into (abstract; col. 1, lines 56-60; col. 2, lines 6-10 and 24-27). Kobayashi discloses means for indexing the position of the plate each time the plate stops to position the through orifices of the plate with baskets supporting jigs holding containers with orifices at predetermined sites (figs. 1 and 8). The indexing means comprises a disk (10), which is mounted below the horizontal plate and interlocked with the vertical central shaft (figs. 1 and 3). The disk is provided with a recess (10a) on its outer peripheral edge (fig. 3). A horizontal finger (12) contacts the disk with a stopper (12b), which is commonly known to be made of elastic means, such as rubber, when the plate is stopped and being indexed (fig. 3; col. 3, lines 5-12). In the event one would argue that the stopper is not made of elastic means, it would have been obvious to one having ordinary skill in the art at the

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time the invention was made to make the contacting means out of elastic since it is very well known to be an effective material for stopping objects in motion and absorbing shock.

Regardless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Brimhall to include the indexing means of Kobayashi for effectively and accurately stopping the centrifuging process.

Brimhall discloses that the device is portable and configured to process a variety of sample containers having a preselected range of sizes (col. 1, lines 47-51). It appears that the orifices of the plate are capable of holding tubes with a volume of 2 ml or 5 ml. Tubes come in different lengths, and using tubes of different lengths could provide for volumes of 2 ml or 5 ml without changing the orifices of the plate or orifices of the jig. Regardless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide tubes that can hold volumes of 2 ml or 5 ml as necessary or desired to accommodate the sample size.

Brimhall does not specifically address the maximum rotational speed of the plate. The instant specification discloses that the maximum rotational speed is dependent on how many tubes are being held and the volume of sample they hold. Furthermore, what one would consider being the maximum rotational speed appears to be a matter of perspective. The device of Brimhall could hold any number of tubes with any volume of sample and weigh down the device, such that the maximum rotational speed of the plate may be 13,000 revolutions/minute or 4,500 revolutions/minute or 5,000 revolutions/minute. Regardless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to accommodate more tubes with more samples, such that the maximum rotational speed is 13,000 revolutions/minute

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or 4,500 revolutions/minute or 5,000 revolutions/minute as necessary or desired to perform multiple separations simultaneously and efficiently for high-throughput.

Brimhall fails to disclose the claimed dimensions of the horizontal plate, casing, and vessel. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the dimensions of the horizontal plate, casing, and vessel in the device of Brimhall to centrifuge a particular number of samples with different volumes at one time as desired or necessary. Furthermore, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art (*In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)) and that where the only difference between the prior art and the claims was a recitation of relative dimensions would not perform different than the prior art device, the claimed device was not patentably distinct from the prior art device (*Gardner v. TEC Systems, Inc.*, 725 F.2d 1388, 220 USPQ 77 (Fed. Cir 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984)).

Brimhall fails to disclose the horizontal plate with 48 orifices. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide 48 orifices in the horizontal plate of Brimhall to perform the desired number of separations at one time.

23. Claims 1, 2, 4-7, 10-14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 5,322,497 to Kobayashi.

Kobayashi discloses a device for centrifuging chemical or biological products (fig. 1). The device comprises a casing (1) defining a vessel, which contains a vertical central shaft (4), horizontal plate (6), and means for indexing (10, 10a, 12, 12a-c, 11, 11a, 13) (figs. 1, 3, 4, and 8).

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The vessel is open at the top when the cover (15) is slid open by actuator (15a) to expose opening (2b) (figs. 1 and 2; col. 2, lines 61-65). The vertical central shaft rotates by a rotary driving means (5) (fig. 1; col. 1, lines 25-28 and 40-45; col. 3, lines 50-57; col. 4, lines 7-10). The horizontal plate is mounted on and interlocked with the vertical central shaft (fig. 1; col. 1, lines 12-49; col. 2, lines 4-12 and 50-65). The horizontal plate is provided with through orifices defined by parallel arms each with attached lug shafts (7a) on which baskets (7) with jigs (9) accommodating containers (8) with chemical or biological products are supported (figs. 1 and 8). The through orifices of the plate provide for mounting of containers (8), which are in the form of tubes. Since the baskets supporting jigs with containers are freely rotating, they may be in the upright or vertical position or assume a horizontally inclined position (figs. 1 and 8). The means for indexing indexes the position of the plate each time the plate stops to position the through orifices of the plate with baskets supporting jigs holding containers with orifices at predetermined sites (figs. 1 and 8). The indexing means comprises a disk (10), which is mounted below the horizontal plate and interlocked with the vertical central shaft (figs. 1 and 3). The disk is provided with a recess (10a) on its outer peripheral edge (fig. 3).

A horizontal finger (12) contacts the disk with a stopper (12b), which is commonly known to be made of elastic means, such as rubber, when the plate is stopped and being indexed (fig. 3; col. 3, lines 5-12). In the event one would argue that the stopper is not made of elastic means, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the contacting means out of elastic since it is very well known to be an effective material for stopping objects in motion and absorbing shock.

When the plate is rotating in the centrifuging phase, the stopper is not in contact with the disk (fig. 1). The rotary driving means (5) is also the means for pivoting the plate until the finger cooperates with the recess of the disk since the instant specification states that the main motor used in centrifugal separation may also be the means for pivoting. It is unclear whether the rotary driving means pivots the plate in a stepwise manner. Conceivably, successive contact of the stopper with the disk in the attempt to stop the plate may induce a stepwise effect to the motion of the plate driven by the rotary driving means. Regardless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide pulses of energy to the rotary driving means of Kobayashi to more quickly stop the plate from moving.

The jigs may be considered a microtiter plate since microtiter plates comes in different shapes and sizes. Furthermore, the baskets are capable of supporting microtiter plates. Regardless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to support microplates on the baskets of Kobayashi to perform multiple separations and use microtiter plates, which are very well known, to conform with convention and automation for convenience and efficiency.

It appears that the orifices of the plate are capable of holding tubes with a volume of 2 ml or 5 ml. Tubes come in different lengths, and using tubes of different lengths could provide for volumes of 2 ml or 5 ml without changing the orifices of the plate or orifices of the jig. Regardless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide tubes that can hold volumes of 2 ml or 5 ml as necessary or desired to accommodate the sample size.

Kobayashi does not specifically address the maximum rotational speed of the plate. The instant specification discloses that the maximum rotational speed is dependent on how many tubes are being held and the volume of sample they hold. Furthermore, what one would consider being the maximum rotational speed appears to be a matter of perspective. The device of Kobayashi could hold any number of tubes with any volume of sample and weigh down the device, such that the maximum rotational speed of the plate may be 13,000 revolutions/minute or 4,500 revolutions/minute. Regardless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to accommodate more tubes with more samples, such that the maximum rotational speed is 13,000 revolutions/minute or 4,500 revolutions/minute or 5,000 revolutions/minute as necessary or desired to perform multiple separations simultaneously and efficiently for high-throughput.

It is unclear whether the mounting orifices are the orifices provided on the surface of the plate or the openings of tubes. Applicant has not provided a working definition of substantially elongated, and the drawings do not show a substantially elongated orifice in either circumstance. In fact, the orifices on the plate and openings of the tubes do not look elongated. Therefore, the through orifices of Kobayashi are considered substantially in an elongate shape. It also appears that the width and length of the orifice have different dimensions to produce an elongated shape. Furthermore, the process of making an orifice would give way to inherent differences in the dimensions of the orifice to produce an elongated shape. Examiner notes that whether a wall is inclined at an acute angle of less than 90 degrees relative to the horizontal is a matter of perspective. If the wall is perceived in one direction as inclined at 89 degrees relative to the horizontal, it may be perceived in the other direction as inclined at 91 degrees relative to the

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horizontal. It is unclear whether the front and rear walls of the orifice of Kobayashi are inclined at an acute angle of less than 90 degrees relative to the horizontal. However, the process of making an orifice would give way to inherent imperfect inclination such that the front and rear walls of the orifice are inclined at an acute angle of less than 90 degrees relative to the horizontal. Furthermore, it has been held that changing the form or shape is an obvious engineering design absent persuasive evidence that the particular configuration of the claimed invention was significant (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)) and that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device (*Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984)).

Although it is unclear whether the device is poisoned on a horizontal working plate with an available area less than or equal to about  $0.4 \text{ m}^2$ , this is considered by the Examiner a recitation of intended use of the claimed invention. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPQ 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

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The external “useful” height appears to be a matter of perspective. A person may decide that the external “useful” height corresponds to the height of the rotor. It appears that this limitation is intrinsically met. Regardless, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the height of the device of Goodman since it has been held that discovering an optimum workable range involves only routine skill in the art (*In re Aller*, 105 USPQ 233) and that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device (*Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984)).

24. Claims 3, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,665,047 to Brimhall or U.S. Patent No. 5,322,497 to Kobayashi in view of U.S. Patent No. 3,707,354 to Goodman.

Brimhall and Kobayashi each fails to disclose two identical vessels with two identical plates linked in rotation and driven simultaneously by a rotary driving means. However, it would have been obvious to one having ordinary skill in the art to modify the device of Kobayashi or Brimhall to include two identical vessels with two identical plates linked in rotation and driven simultaneously by a rotary driving means to complete as many desired or required separations at one time as taught by Goodman.

Kobayashi fails to disclose a lid, which closes the vessel, is mounted so as to pivot on the casing. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Kobayashi to provide a lid that pivots on the



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casing since it effectively closes the vessels from the environment and easily opens without too many manipulations as taught by Goodman.

25. Alternatively, claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,322,497 to Kobayashi in view of U.S. Patent No. 4,147,294 to Davidson et al.

Since Kobayashi does not label the container as a microtiter plate but a jig, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use microtiter plates in the device of Kobayashi since it is very well known to collect and perform assays and centrifugal separation in microtiter plates in a high-throughput manner as taught by Davidson et al.

26. Claims 18, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,665,047 to Brimhall or U.S. Patent No. 5,322,497 to Kobayashi in view of U.S. Patent No. 2,272,675 to Knudsen or U.S. Patent No. 1,831,860 to Harrison.

Applicant has not limited the material of the plate or swing tray to aluminum alloy covered with nickel plating or inox with the term "preferably." A plate or swing tray made of metal material is sufficient to meet the claim. Brimhall and Kobayashi each fails to disclose that the plate or swing tray is made of a metal. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the plate or swing tray from aluminum since it is a non-magnetizing material as taught by Knudsen and acid resistant material as taught by Harrison.

27. Claims 18, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,665,047 to Brimhall or U.S. Patent No. 5,322,497 to Kobayashi in view of U.S. Patent No. 5,834,420 to Laub et al.

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Applicant has not limited the material of the plate or swing tray to aluminum alloy covered with nickel plating or inox with the term “preferably.” A plate or swing tray made of metal material is sufficient to meet the claim. Brimhall and Kobayashi each fails to disclose that the plate or swing tray is made of a metal. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the plate or swing tray of Brimhall or Kobayashi out of a metallic material, such as high-strength INOX since it would be in keeping with pharmaceutical good manufacturing practices and can be subjected to sanitary treatment in situ as taught by Laub et al. (col. 10, lines 6-9).

28. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,665,047 to Brimhall or U.S. Patent No. 5,322,497 to Kobayashi in view of U.S. Patent No. 4,781,669 to Piramoon or U.S. Patent No. 5,601,522 to Piramoon.

Applicant has not limited the material of the plate or swing tray to carbon with the term “preferably.” A plate or swing tray made of any composite material is sufficient to meet the claim. Kobayashi fails to disclose the plate or swing tray made of a composite material. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the plate or swing tray of Brimhall or Kobayashi from a carbon composite material for substantial strength, light weight, and capability of enduring high loads and speeds as taught by Piramoon (‘669 or ‘522).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Quan whose telephone number is (571) 272-1261. The examiner can normally be reached on M-F (8:00-4:30).


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner  
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